INDEX TO AUTHORS

A

Adams, Mildred, Bollman, Jesse L., and **Boothby, Walter M.** Comparison of results obtained by the Benedict oxycalorimeter with those by elementary analysis, xci

Adams, W. L. See BING, ADAMS, and BOWMAN, cvii

Alexieff, Anna. See GOETTSCH and BROWN, 549

Anderson, R. J. The chemistry of the lipids of tubercle bacilli. XXVIII. Studies on phthioic acid. Isolation of a levorotatory acid from the phthioic acid fraction of the human tubercle bacillus, 639

— and **Uyei, Nao.** The chemistry of the lipids of tubercle bacilli. XXVII. The composition of the phosphatide fraction of the *Bacillus lepræ*, 617

—. See BENGIS and ANDERSON, 99

—. See CROWDER and ANDERSON, 393

Andes, Jerome E., and **Myers, Victor C.** Studies on the guanidine content of human blood, cix

Andrews, James C. The oxidation of cystine in acid solution, 657

—. The racemization and decomposition of cystine in acid solution, xix

Anslow, Gladys A., and **Foster, Mary Louise.** The influence of substituent groups on the visible and ultra-violet absorption spectra of amino acids and related substances, 37

Armstrong, Lillian. See HUNSCHER, COPE, NOLL, MACY, COOLEY, PENBERTHY, and ARMSTRONG, lxiv

Austin, W. C., and **Prusait, Walter.** The transformation of *d*-glucose into *d*-fructose by pyridine, lxxx

B

Baernstein, Harry D. The determination of methionine in proteins, 663

—. Sulfur distribution in proteins, xxv

—. The sulfur distribution in proteins, 669

Ball, Eric G. Hemolytic action of silver occurring as an impurity in chemically pure sodium chloride, xciv

Barron, E. S. Guzman. The rate of autoxidation of oxidation-reduction systems and its relation to their free energy, 287

— and **Hastings, A. Baird.** The mechanism of lactic acid oxidation by the α-hydroxyoxidase of gonococci, lxxiii

— and **Miller, C. Phillip, Jr.** Studies on biological oxidations. I. Oxidations produced by gonococci, 691

Baumann, Emil J., and **Metzger, Nannette.** The determination of iodine in blood, tissues, and food, xc

Baxter, Blanch. See Gutman, Benedict, Baxter, and Palmer, 303

Bazin, Eleanor V. See Rabinowitch, 163

Beber, A. J. See Burr and Beber, xxxvi

Bender, R. C. See Supplee, Bender, and Dorcas, 63

Benedict, Ethel M. See Gutman, Benedict, Baxter, and Palmer, 303

Bengis, R. O., and **Anderson, R. J.** The chemistry of the coffee-bean. I. Concerning the unsaponifiable matter of the coffee-bean oil. Preparation and properties of kahweol, 99

Berg, Clarence P. The influence of optical activity on the production of kynurenic acid, lxviii

Bernardoni, Bernard. See Hendrix and Bernardoni, xcv

Bierman, W. See Fishberg and Bierman, 433

Bill, Arthur H. See Mull and Bill, lxv

Bills, Charles E. See Honeywell and Bills, xxxix

Bing, Franklin C., Adams, W. L., and **Bowman, R. O.** The protein requirements of the albino mouse, cvii

Binns, Dorothy. See Muntwyler and Binns, lxxviii

Bischoff, Fritz, Maxwell, L. C., and **Ullmann, H. J.** Hormones in cancer. VII. Effect of the anterior lobe growth-promoting principle on the growth behavior of neoplasms, cii

Blatherwick, N. R., Medlar, E. M., Bradshaw, Phoebe J., Post, Anna L., and **Sawyer, Susan D.** The occurrence of fatty livers in rats fed diets containing liver, xxxiii

Blish, M. Eleanor. See Kerr and Blish, 11

Block, Richard J., and **Cowgill, George R.** The antineuritic vitamin. III. Removal of impurities by fractional precipitation, 421

— and **Jackson, Richard W.** The metabolism of cystine and methionine, cvi

Bloor, W. R. See Snider and Bloor, xxxiii

Bodansky, Aaron, Jaffe, Henry L., and **Chandler, Joseph P.** Experimental factors influencing blood phosphatase values, lxvi

XUM

Bodansky, Meyer. See DAVIS and BODANSKY, lv

Bollman, Jesse L. See ADAMS, BOLLMAN, and BOOTHBY, xci

Boothby, Walter M. See ADAMS, BOLLMAN, and BOOTHBY, xci

Bordley, James, 3rd, and **Richards, A. N.** Quantitative determinations of uric acid in glomerular urine and blood plasma from frogs and snakes, lxxii

Bott, P. A. See PFIFFNER, VARS, BOTT, and SWINGLE, xlvi

Bowman, R. O. See BING, ADAMS, and BOWMAN, cvii

Bradley, H. C. See TORBET and BRADLEY, cx

Bradshaw, Phoebe J. See BLATHERWICK, MEDLAR, BRADSHAW, POST, and SAWYER, xxxiii

Brand, Erwin, and **Harris, Meyer M.** Phosphorus metabolism in muscular disease, lxii

Brooke, Richard O., and **Smith, Arthur H.** The mechanism of base conservation of rats receiving a diet low in inorganic constituents, cv

Brown, Elizabeth F. See GOETTSCH and BROWN, 549

Brown, Helen Bennett. See SHOHL, BROWN, ROSE, and SAURWEIN, x

Brown, J. B. Further observations on the nature of the highly unsaturated fatty acids of beef brains, 183

Browne, J. S. L. See COLLIP, BROWNE, and THOMSON, xvii

Bruger, Maurice, and **Somach, Irving.** The diurnal variations of the cholesterol content of the blood, 23

—. See MOSENTHAL and BRUGER, lxxxiii

Buell, Mary V., and **Strauss, Margaret B.** Phosphorus and carbohydrate metabolism in the autolyzing muscle of normal, hyperthyroid, and adrenalectomized animals, lxv

Burget, G. E. See MOORE, LLOYD, and BURGET, 345

Burr, George O., and **Beber, A. J.** A study of the gas exchange of rats suffering from a deficiency of unsaturated fatty acids, xxxvi

—, **Burr, Mildred M.,** and **Miller, Elmer S.** On the fatty acids essential in nutrition. III, 1

Burr, Mildred M. See BURR, BURR, and MILLER, 1

Butler, A. M. See GAMBLE, MCKHANN, and BUTLER, lvii

Butz, Lewis W. The thermal decomposition of methionine in acid solution, xxi

C

Calvery, Herbert O. Analysis of egg-shell keratin, xxvi

Campbell, H. L. See SHERMAN and CAMPBELL, iii

Campbell, Walter R. On the estimation of urea in blood and urine, xcvi

Cary, C. A., and **Hufnagel, C. F.** Effect of tryptophane on gain in weight when used to supplement corn-meal protein, xxxii

Cerecedo, Leopold R., and **Stekol, Jakob A.** Studies on the metabolism of growing dogs, lx

Chambers, William H., Kennard, Margaret A., Pollack, Herbert, and **Dann, Margaret.** Animal calorimetry. XLII. The respiratory metabolism of exercise and recovery in depancreatized dogs, 525

Chandler, Joseph P. See Bodansky, Jaffe, and Chandler, lxvi

Chanutin, Alfred. Studies in kidney insufficiency produced by partial nephrectomy; liver diets, ciii

Chen, K. K. See Jensen and Chen, cx

Christman, A. A. A simple procedure for the detection of carbon monoxide in blood, xcvi

Church, Anna E. See Sure, Kik, and Church, vi

Clarke, H. T. The action of sulfite upon cystine, 235

Clemence, Leroy W. See Raiziss, Severac, and Clemence, xcviii

Clowes, G. H. A. See Walden and Clowes, xi

Collins, Dean A., and **Scott, F. H.** The freezing points of serum and corpuscles, 189

Collip, J. B., Browne, J. S. L., and **Thomson, D. L.** The relation of emmenin to other estrogenic hormones, xvii

Cool, Raymond D. Determination of small amounts of ethyl iodide, 47

Cooley, Thomas B. See Hunscher, Cope, Noll, Macy, Cooley, Penberthy, and Armstrong, lxiv

Coons, Callie Mae. Iron retention by women during pregnancy, 215

Cooper, Mary A. See Quick, 403

Cope, Francis. See Hunscher, Cope, Noll, Macy, Cooley, Penberthy, and Armstrong, lxiv

Cori, Carl F., and **Cori, Gerty T.** Plasma phosphates during changes in carbohydrate metabolism in normal and adrenalectomized animals, lxxxv

Cori, Gerty T. See Cori and Cori, lxxxv

Cowgill, George R. See Block and Cowgill, 421

Cox, Warren M., Jr. The nutritive value of pure fatty acid esters, xxxvii

Cretcher, Leonard H. See Renfrew and Cretcher, 503

Crowder, J. A., and **Anderson, R. J.** A contribution to the chemistry of *Lactobacillus acidophilus*. I. The occurrence of free, optically active, dihydroxystearic acid in the fat extracted from *Lactobacillus acidophilus*, 393

XUM

Csonka, Frank A. Studies on glutelins. VII. Cystine, tryptophane, and tyrosine content of glutelins, 281

—. See JONES and CSONKA, xxix

Curtis, Jack M. Comparison of theelin and theelol with extracts of liquor folliculi, liv

Czarnetzky, E. J., and Schmidt, Carl L. A. The isolation of norleucine, with evidence for its identity, and some thermodynamic data based on the dissociation pressures of the compounds which the isomeric leucines form with ammonia and hydrogen chloride, 333

D

Daly, Cornelius A., and Knudson, Arthur. The acid-base equilibrium and phosphorus metabolism in hyperthermia, lvii

Dann, Margaret. See CHAMBERS, KENNARD, POLLACK, and DANN, 525

Davis, Martha E., and Bodansky, Meyer. Changes in the composition of the blood in the rabbit during pregnancy and lactation, lv

Deere, Charles J. See HARNED and DEERE, lxxxii

Dill, D. B., Edwards, H. T., and Talbott, J. H. Alkalosis and the capacity for work, lviii

—. See TALBOTT, HENDERSON, EDWARDS, and DILL, xl

Doisy, Edward A. See KATZMAN and DOISY, lii

Dolin, B. T. See FISHBERG and DOLIN, lxxxviii

Dorcas, M. J. See SUPPLEE, BENDER, and DORCAS, 63

Dreyer, N. B., and Young, E. Gordon. On the excretion of uric acid and urates by the bird, lxx

Dubin, Harry E., and Hooper, C. W. The quantitative application of the antimony trichloride color reaction for vitamin A, v

E

Eberhard, Harry M. See HEPBURN, EBERHARD, RICKETTS, and RIEGER, xliij

Eckstein, H. C. The highly unsaturated fatty acids in butter, xxxv

Edel, Frances. See EXTON and ROSE, xxvii

Edwards, H. T. See DILL, EDWARDS, and TALBOTT, lviii

—. See TALBOTT, HENDERSON, EDWARDS, and DILL, xl

Ehrenfest, Ellen. The influence of monoiodoacetate on oxidation and fermentation by yeast, lxxvi

Elderfield, Robert C. See JACOBS and ELDERFIELD, 727

Ellinwood, E. H. See WALKER, ELLINWOOD, and REISINGER, lxxii

Elvehjem, C. A. The action of copper in iron metabolism, xvi

Elvehjem, C. A., and **Neu, V. F.** Studies in vitamin A avitaminosis in the chick, 71

— and **Peterson, W. H.** The hemoglobin content of the blood of infants, xi

—. See STARE and ELVEHJEM, 511

Evans, E. A., Jr. See JENSEN and EVANS, xlviii

Evenden, James. See CHAMBERS, KENNARD, POLLACK, and DANN, 525

Everett, Mark R., and **Sheppard, Fay.** The nitrogen of alkaline mercury filtrates, lxxxi

Ewing, Mary E. A method of collecting and preserving small blood samples for glucose determinations, cvii

Exton, William G., and **Rose, Anton R.** The clinical partition of blood protein by scopometry. II. Method, xxvii

F

Fairhall, Lawrence T., and **Heim, J. W.** A rapid micro method of chloride analysis, xciii

Falk, K. George, and **McGuire, Grace.** Directive influences in biological systems. II. Lipase actions of Types I and II pneumococci, 651

Fishberg, Ella H., and **Bierman, W.** Acid-base balance in sweat, 433

— and **Dolin, B. T.** Homogentisic acid: a physiological oxidation-reduction system, lxxxviii

Fleck, Elmer E. See JACOBS and FLECK, 57

Folin, Otto. The determination of ammonia in blood and other biological fluids, 141

Foster, Mary Louise. See ANSLOW and FOSTER, 37

Fred, E. B. See PRUESS, PETERSON, and FRED, 483

Frey, Charles N. See HESS, LIGHT, FREY, and GROSS, 369

Freytag, F. C., and **Smith, H. Gregg.** The unsaponifiable lipids of beef liver, xxxviii

Fry, Edith G. See WOODWARD and FRY, 465

Funk, Casimir, and **Harrow, Benjamin.** The male hormone. V. The effect of the male hormone and the anterior pituitary, cviii

G

Gaebler, Oliver Henry. The effect of anterior pituitary extracts on the nitrogen balance and urine volume of dogs, li

Gamble, James L., McKhann, C. F., and **Butler, A. M.** An economy of water in renal function referable to urea, lvii

Glick, David. Relationships between the constitution of organic compounds and their effects upon esterase and lipase, lxvii

— and **King, C. G.** Relationships between the activation of pancreatic lipase and the surface effects of the compounds

involved. The mechanism of inhibition and activation, 675

Goettsch, Marianne, and **Brown, Elizabeth F.** Muscle creatine in nutritional muscular dystrophy of the rabbit, 549

Gortner, Ross Aiken. See WILKERSON and GORTNER, lxi

Graham, Claire E. See GRIFFITH and GRAHAM, vii

Greenberg, David M. Ultrafiltration. II. Bound water (hydration) of biological colloids, xlv

— and **Greenberg, Louis.** Is there a compound of the nature of calcium citrate present in the blood? ciii

Greenberg, Louis. See GREENBERG and GREENBERG, ciii

Greenwald, Isidor, and **Levy, Irving.** The nature of the "acid-soluble" phosphorus in plasma, xci

Griffith, Wendell H., and **Graham, Claire E.** The effect of vitamins B_1 and B_2 on the appetite and the utilization of food in rats, vii

Gross, Joseph. See HESS, LIGHT, FREY, and GROSS, 369

Gunderson, M. F. See SKINNER and GUNDERSON, 53

Gutman, Alexander B., Benedict, Ethel M., Baxter, Blanch, and **Palmer, Walter W.** The effect of administration of iodine on the total iodine, inorganic iodine, and thyroxine content of the pathological thyroid gland, 303

H

Halpin, J. G. See STEENBOCK, KLETZIEN, and HALPIN, 249

Haman, R. W. See STEENBOCK, KLETZIEN, and HALPIN, 249

Hanna, William Fielding, Vickery, Hubert Bradford, and **Pucher, George W.** The isolation of trimethylamine from spores of *Tilletia levis*, the stinking smut of wheat, 351

Hanning, Flora. See STEENBOCK, KLETZIEN, and HALPIN, 249

Hansen, Louis O. See WAKEHAM and HANSEN, 155

Hanzal, R. F., and **Myers, Victor C.** The excretion of methyl uric acids after the ingestion of methylated xanthines, lxix

Harned, Ben K., and **Deere, Charles J.** More complete oxidation of sugars in alkaline solution in presence of cyanide, lxxxii

— and **Nash, Thomas P., Jr.** The protection of insulin by antiproteases, and its absorption from the intestine, 443

— and —. Protection of insulin by antitrypsin, li

Harris, Meyer M. See BRAND and HARRIS, lxii

Harrow, Benjamin. See FUNK and HARROW, cviii

XUM

Hart, E. B. See KLINE, SCHULTZE, and HART, 83

Hastings, A. Baird, and **Shock, N. W.** Acid-base paths in humans, lx

—. See BARRON and HASTINGS, lxxiii

Heim, J. W. See FAIRHALL and HEIM, xciii

Heller, V. G., Hunter, K. R., and **Thompson, R. B.** Phosphorus distribution in chicken blood as affected by the diet, 127

Hemingway, Allan, and **McClendon, J. F.** Electrical conductivity of human tissues for alternating currents of one million cycles per second, xcix

Henderson, L. J. See TALBOTT, HENDERSON, EDWARDS, and DILL, xl

Hendrix, Byron M., and **Bernardoni, Bernard.** The distribution of carbon dioxide between solutions of sodium bicarbonate and cottonseed oil, xcv

Hepburn, Joseph S., Eberhard, Harry M., Ricketts, Rowland, and **Rieger, Charles L. W.** Gastrointestinal temperature studies, xliii

Hess, Alfred F., Light, Robert F., Frey, Charles N., and **Gross, Joseph.** A study of the milk, blood, and excreta of cows fed moderate and excessive amounts of irradiated yeast or ergosterol, 369

Hess, W. C. See SULLIVAN and HESS, xxv

Hogan, Albert G., and **Richardson, Luther R.** The effect of ultra-violet rays on the dermatitis-preventing vitamin, vii

Hollander, Franklin. The composition of gastric juice as a function of its acidity. Some properties of the parietal secretion, xli

—. Studies in gastric secretion. IV. Variations in the chlorine content of gastric juice and their significance, 585

Holly, Olive M. See SANDBERG and HOLLY, 31

Holmes, Arthur D., and **Tripp, Francis.** Factors which influence the effectiveness of a rachitogenic ration, ix

Honeywell, Edna M., and **Bills, Charles E.** Cerevisterol, a sterol accompanying ergosterol in yeast, xxxix

Hooper, C. W. See DUBIN and HOOPER, v

Hufnagel, C. F. See CARY and HUFNAGEL, xxxii

Hunscher, Helen A., Cope, Francis, Noll, Alice, Macy, Icie G., Cooley, Thomas B., Penberthy, Grover C., and **Armstrong, Lillian.** Successive mineral balances in childhood, lxiv

Hunter, K. R. See HELLER, HUNTER, and THOMPSON, 127

J

Jackson, Richard W. See BLOCK and JACKSON, cvi

Jacobs, Walter A. The ergot alkaloids. I. The oxidation of ergotinine, 739
— and **Elderfield, Robert C.** Strophanthin. XXVII. Ring III of strophanthidin and related aglucones, 727
— and **Fleck, Elmer E.** Strophanthin. XXVI. A further study of the dehydrogenation of strophanthidin, 57
Jaffe, Henry L. See Bodansky, Jaffe, and Chandler, lxvi
Jensen, H., and Chen, K. K. The chemical studies of toad poisons, cx
— and **Evans, E. A., Jr.** The chemical study of insulin, xlviii
— and **Wintersteiner, Oskar.** Studies on crystalline insulin. XIV. The isolation of glutamic acid, 93
Jones, D. Breese, and Csonka, Frank A. Precipitation of soy bean proteins at various concentrations of ammonium sulfate, xxix
—. See Nelson, Walker, and Jones, vi

K

Kahn, Jos. See Sobotka, Peck, and Kahn, lxxix
Katzman, P. A., and Doisy, Edward A. Preparation, purification, and assay of an anterior pituitary-like substance from urine during pregnancy, lii
Keil, H. L., and Nelson, Victor E. The effect of oral administration of amino acids and intraperitoneal injection of various elements and hydrochloric acid on regeneration of hemoglobin, 115
Kendall, Edward C. Chemical studies of the suprarenal gland, iv
Kennard, Margaret A. See Chambers, Kennard, Pollack, and Dann, 525
Kerly, Margaret, and Ronzoni, Ethel. The effect of pH on the anaerobic metabolism of isolated frog muscle, lxxiv
Kerr, Stanley E., and Blish, M. Eleanor. The effect of insulin on the phosphorus compounds of muscle, 11
Kik, M. C. See Sure, Kik, and Church, vi
King, C. G. See Glick and King, 675
—. See Waugh and King, 325
Kirk, J. Stanley, and Sumner, James B. Further studies on antiurease, lxxxvii
Kletzien, S. W. F., Templin, Vera M., Steenbock, H., and Thomas, B. H. Vitamin D and the conservation of calcium in the adult. I, 265
—. See Steenbock, Kletzien, and Halpin, 249
Kline, O. L., Schultze, M. O., and Hart, E. B. Carotene and xanthophyll as sources of vitamin A for the growing chick, 83
Knudson, Arthur. See Daly and Knudson, lvii

XUM

Kocher, R. A. The total metabolism of the king snake, with special reference to the specific dynamic action of food, lxxi

Kramer, Benjamin. See SOBEL and KRAMER, lxxxix

Kruse, H. D., Orent, Elsa, and **McCollum, E. V.** Chemical changes in the blood following magnesium deprivation, iii

Kugelmass, I. Newton. Diet and hemorrhagic disease, xii

L

Levene, P. A., and **Marker, R. E.** Chemical structure and optical rotation. III. The configurational relationship of disubstituted propionic acids containing a cyclohexyl group. Also, a correction to the paper on the configurational relationship of disubstituted propionic acids containing a phenyl group, 563

— and —. Configurational relationships of methylphenyl-, methylcyclohexyl-, and methylhexylcarbinols and of their homologues, 379

— and **Raymond, Albert L.** On the structure of the so called 5-methylglucose of Ohle and von Vargha, 751

— and —. The substitution of glucose in position (4). I, 763

—, **Steiger, Robert E.,** and **Rothen, Alexandre.** The relation of chemical structure to the rate of hydrolysis of peptides. VII. Hydrolysis of dipeptides by alkali, 717

Levene, P. A., and **Tipson, R. Stuart.** The ring structure of guanosine, 491

Levine, Harold. Studies on the relation of diet to goiter. I. A dietary technique for the study of goiter in the rat, c

Levy, Irving. See GREENWALD and LEVY, xci

Levy, Milton. The titration constants of amino acids in the formol titration, xcii

Light, Robert F. See HESS, LIGHT, FREY, and GROSS, 369

Lloyd, R. W. See MOORE, LLOYD, and BURGET, 345

Looney, Joseph M. A new method for the determination of albumin and globulin in blood serum, xxvi

Loring, Hubert S., and **du Vigneaud, Vincent.** The isolation and characterization of mesocystine, xxiv

Lowe, James T. See STEENBOCK, KLETZIEN, and HALPIN, 249

M

MacCorquodale, D. W. See THAYER and MACCORQUODALE, liii

MacKay, Eaton M. The distribution of glucose in human blood, 685

Macy, Icie G. See HUNSCHER, COPE, NOLL, MACY, COOLEY, PENBERTHY, and ARMSTRONG, lxiv

Major, Ralph H. See WEBER, NANNINGA, and MAJOR, xcviii

Marker, R. E. See LEVENE and MARKER, 379, 563

Maxwell, L. C. See BISCHOFF, MAXWELL, and ULLMANN, cii

McCarthy, Mary. See EXTON and ROSE, xxvii

McClendon, J. F. See HEMINGWAY and MCCLENDON, xcix

McCollum, E. V. See KRUSE, ORENT, and MCCOLLUM, iii

McCullagh, D. Roy. The distribution of androtin (male sex hormone) in the male, xlvii

McGuire, Grace. See FALK and MCGUIRE, 651

McKhann, C. F. See GAMBLE, MCKHANN, and BUTLER, lvii

Medlar, E. M. See BLATHERWICK, MEDLAR, BRADSHAW, POST, and SAWYER, xxxiii

Menschick, W. See PAGE and MENSCHICK, 359

Metzger, Nannette. See BAUMANN and METZGER, xc

Miller, C. Phillip, Jr. See BARRON and MILLER, 691

Miller, Elmer S. See BURR, BURR, and MILLER, 1

Mitchell, Helen S. Factors influencing anemia development in young rats, xv

Moore, Philip H., Lloyd, R. W., and Burget, G. E. The copper reduction values of mannose under certain fixed conditions, 345

Morse, Minerva. See SCHLUTZ and MORSE, lix

Morse, Withrow. Chemistry of the integument. IV. Collagen, xxx

Mosenthal, Herman O., and Bruger, Maurice. The effect of glucose ingestion on the urea, total non-protein nitrogen, and chloride concentration in the blood, lxxxiii

Mull, James W., and Bill, Arthur H. Normal range of serum calcium and inorganic phosphorus in women, lxv

Muntwyler, Edward, and Binns, Dorothy. The effect of cyanide on the respiration of rat liver and kidney, lxxviii

Murlin, John R. See PIERCE, NASSET, and MURLIN, xlii

Myers, Victor C. See ANDES and MYERS, cix

—. See HANZAL and MYERS, lxix

N

Nanninga, J. B. See WEBER, NANNINGA, and MAJOR, xcviii

Nash, Thomas P., Jr. See HARNED and NASH, li, 443

Nasset, E. S. See PIERCE, NASSET, and MURLIN, xlii

Nelson, E. M., Walker, Reed, and Jones, D. Breese. The rate of transfer of ingested vitamin A to the liver of the rat, vi

Nelson, Victor E. See KEIL and NELSON, 115
Neu, V. F. See ELVEHJEM and NEU, 71
Nicholas, H. O. Diffusible serum calcium by high pressure ultrafiltration, 457
Nicolet, Ben H. The mechanism of saccharinic acid formation, lxxx
Noll, Alice. See HUNSCHER, COPE, NOLL, MACY, COOLEY, PENBERTHY, and ARMSTRONG, lxiv
Norris, R. C. See WEST, NORRIS, and STEINER, lxxxii

O

O'Brien, Helen. See STADIE, SUNDERMAN, O'BRIEN, and WILLIAMS, xcvii
Okey, Ruth, and **Stewart, Dorothy.** Effect of sterol content of the diet upon cyclic variations in blood cholesterol in women, xxxix
Olcott, H. S. The preparation and properties of a concentrate of vitamin E from lettuce, x
Orent, Elsa. See KRUSE, ORENT, and MCCOLLUM, iii

P

Page, Irvine H., and **Menschick, W.** The destruction of cholesterol by the animal organism, 359
Palmer, Walter W. See GUTMAN, BENEDICT, BAXTER, and PALMER, 303
Parsons, Helen T. The effect on the toxicity of egg white of various heat treatments, xxx
Peck, S. M. See SOBOTKA, PECK, and KAHN, lxxix
Penberthy, Grover C. See HUNSCHER, COPE, NOLL, MACY, COOLEY, PENBERTHY, and ARMSTRONG, lxiv
Peterson, W. H. See ELVEHJEM and PETERSON, xi
—. See PRUESS, PETERSON, and FRED, 483
—. See SKINNER, STEENBOCK, and PETERSON, 227
Pett, L. B., and **Wynne, A. M.** The formation of methylglyoxal by *Clostridium acetobutylicum,* 177
Pfiffner, J. J., Vars, Harry M., Bott, P. A., and **Swingle, W. W.** Further studies of the adrenal cortical hormone, xlvi
Pierce, H. B., Nasset, E. S., and **Murlin, John R.** Studies on the transplanted intestinal loop. II. A humoral influence in the secretion of intestinal juice, xlii
Pollack, Herbert. See CHAMBERS, KENNARD, POLLACK, and DANN, 525
Post, Anna L. See BLATHERWICK, MEDLAR, BRADSHAW, POST, and SAWYER, xxxiii
Power, Marschelle H. Galactose utilization following complete removal of the liver, lxxxiii
Pruess, L. M., Peterson, W. H., and **Fred, E. B.** Isolation and

identification of ergosterol and mannitol from *Aspergillus fischeri*, 483

Prusait, Walter. See AUSTIN and PRUSAIT, lxxx

Pucher, George W., Vickery, Hubert Bradford, and Wakeman, Alfred J. The determination of the acids of plant tissue. I. The determination of nitric acid, 605

—. See HANNA, VICKERY, and PUCHER, 351

—. See VICKERY, PUCHER, and WAKEMAN, lxxxix

Pugsley, L. I. See THOMSON and PUGSLEY, xcvii

Q

Quick, Armand J. The conjugation of hydroxybenzoic acids in the dog and in man, lxix

—. The relationship between chemical structure and physiological response. II. The conjugation of hydroxy- and methoxybenzoic acids, 403

R

Rabinowitch, I. M. The renal threshold of bilirubin, 163

Raiziss, George W., Severac, M., and Clemence, Leroy W. Chemotherapy of new derivatives of 3-amino-4-hydroxyphenylarsonic acid, xcviii

Ralls, J. O. Some further studies of the factors leading to the abnormal iodine values of cholesterol, xxxviii

Raymond, Albert L. See LEVENE and RAYMOND, 751, 763

Reid, E. The effect of insulin on the blood diastase, p. l

Reisinger, John A. See WALKER, ELLINWOOD, and REISINGER, lxxii

Remington, Roe E. Studies on the relation of diet to goiter. II. The iodine requirement of the rat, ci

Renfrew Alice G., and Cretcher, Leonard H. Quince seed mucilage, 503

Richards, A. N. See BORDLEY and RICHARDS, lxxii

Richardson, Luther R. See HOGAN and RICHARDSON, vii

Ricketts, Rowland. See HEPBURN, EBERHARD, RICKETTS, and RIEGER, xliii

Rieger, Charles L. W. See HEPBURN, EBERHARD, RICKETTS, and RIEGER, xliii

Ronzoni, Ethel. See KERLY and RONZONI, lxxiv

Rose, Anton R. See EXTON and ROSE, xxvii

Rose, Catharine S. See SHOHL, BROWN, ROSE, and SAURWEIN, x

Rose, William C. See ST. JULIAN and ROSE, xxxi

Rothen, Alexandre. See LEVENE, STEIGER, and ROTHEN, 717

S

St. Julian, Ruth Reder, and Rose, William C. The relation of certain 5-carbon amino acids to growth, xxxi

XUM

Sandberg, Marta, and **Holly, Olive M.** On the influence of ethyl isothiocyanate, ethyl thiocyanate, and allyl isothiocyanate on sulfur metabolism in rabbits, 31

Saurwein, Esther M.. See SHOHL, BROWN, ROSE, and SAURWEIN, x

Sawyer, Susan D. See BLATHERWICK, MEDLAR, BRADSHAW, POST, and SAWYER, xxxiii

Schattner, Fred. See EXTON and ROSE, xxvii

Schlutz, Frederic W., and **Morse, Minerva.** Changes in certain blood constituents produced by partial inanition and muscular fatigue, lix

Schmidt, Carl L. A. See CZARNETZKY and SCHMIDT, 333

Schultze, M. O. See KLINE, SCHULTZE, and HART, 83

Scott, F. H. See COLLINS and SCOTT, 189

Severac, M. See RAIZISS, SEVERAC, and CLEMENCE, xcviii

Sheppard, Fay. See EVERETT and SHEPPARD, lxxxi

Sherman, H. C., and **Campbell, H. L.** Observations on growth from the view-point of statistical interpretation, iii

Shinohara, Kamenosuke. Oxidation of disulfides, xxii

Shock, N. W. See HASTINGS and SHOCK, lx

Shohl, Alfred T., Brown, Helen Bennett, Rose, Catharine S., and **Saurwein, Esther M.** Does the ratio of calcium to phosphorus of the diet determine whether rickets is produced in the rat? x

Sinclair, Robert Gordon. Relationship between degree of unsaturation and composition of lipids in animal tissues, xxxiv

Skinner, C. E., and **Gunderson, M. F.** Production of vitamin A by a species of *Corynebacterium*, 53

Skinner, J. T., Steenbock, H., and **Peterson, W. H.** Design and use of a glass cage in anemia studies, 227

Smith, Arthur H. See BROOKE and SMITH, cv

—. See SWANSON and SMITH, 745

Smith, H. Gregg. See FREYTAG and SMITH, xxxviii

Snider, Ruth H., and **Bloor, W. R.** Fatty acids of liver lecithin, xxxiii

Sobel, Albert E., and **Kramer, Benjamin.** The quantitative estimation of potassium in small amounts of serum, with a study of the cobalt-cysteine-hydrogen peroxide complex, lxxxix

Sobotka, Harry, Peck, S. M., and **Kahn, Jos.** Optically active 5,5′-phenylethylhydantoins, lxxix

Somach, Irving. See BRUGER and SOMACH, 23

Somogyi, Michael. The estimation of blood diastase, lxxxvi

XUM

Spiegel-Adolf, Mona. Reversibility of protein denaturation in adsorption and elution, xliv

Stadie, William C., Sunderman, F. William, O'Brien, Helen, and **Williams, Priscilla.** Further studies on the occurrence of carbhemoglobin in the blood, xcvii

Stare, F. J., and **Elvehjem, C. A.** The phosphorus partition in the blood of rachitic and non-rachitic calves, 511

Stearns, Genevieve. The excretion of calcium in the urine of healthy infants and children, lxiii

Steenbock, H., Kletzien, S. W. F., and **Halpin, J. G.** The reaction of the chicken to irradiated ergosterol and irradiated yeast as contrasted with the natural vitamin D of fish liver oils, 249

—. See KLETZIEN, TEMPLIN, STEENBOCK, and THOMAS, 265

—. See SKINNER, STEENBOCK, and PETERSON, 227

Steiger, Robert E. See LEVENE, STEIGER, and ROTHEN, 717

Steiner, Alexander. See WEST, NORRIS, and STEINER, lxxxii

Stekol, Jakob A. See CERECEDO and STEKOL, lx

Stewart, Dorothy. See OKEY and STEWART, xxxix

Strauss, Margaret B. See BUELL and STRAUSS, xv

Stucky, Charles J. Some observations on nutritional anemia, xiii

Sullivan, M. X., and **Hess, W. C.** Cystine studies in arthritis, xxv

Sumner, James B. See KIRK and SUMNER, lxxxvii

Sunderman, F. William. See STADIE, SUNDERMAN, O'BRIEN, and WILLIAMS, xcvii

Supplee, G. C., Bender, R. C., and **Dorcas, M. J.** Irradiated milk: the amount of energy required to prevent rickets in chickens, 63

Sure, Barnett. Avitaminosis. XI. The specific effect of vitamin B on growth as evidenced by the use of vitamin B concentrates, 133

—, **Kik, M. C.,** and **Church, Anna E.** Further studies on the specific effect of vitamin B on growth and on lipid metabolism in avitaminosis, vi

Swanson, Pearl P., and **Smith, Arthur H.** Total nitrogen of the blood plasma of normal albino rats at different ages, 745

Swingle, W. W. See PFIFFNER, VARS, BOTT, and SWINGLE, xlvi

T

Talbott, J. H., Henderson, L. J., Edwards, H. T., and **Dill, D. B.** Factors limiting the capacity of a dog for work, xl

—. See DILL, EDWARDS, and TALBOTT, lviii

XUM

Templin, Vera M. See KLETZIEN, TEMPLIN, STEENBOCK, and THOMAS, 265

—. See STEENBOCK, KLETZIEN, and HALPIN, 249

Thayer, Sidney A., and **MacCorquodale, D. W.** The preparation and bioassay of theelol, liii

Thomas, B. H. See KLETZIEN, TEMPLIN, STEENBOCK, and THOMAS, 265

Thompson, R. B. See HELLER, HUNTER, and THOMPSON, 127

Thomson, D. L., and **Pugsley, L. I.** The mechanism of parathyroid hormone action, xcvii

—. See COLLIP, BROWNE, and THOMSON, xvii

Tipson, R. Stuart. See LEVENE and TIPSON, 491

Torbet, Virginia, and **Bradley, H. C.** The unmasking of arginine in peptic digestion, cx

Torigoe, Masamichi. See TWEEDY and TORIGOE, xlviii

Tripp, Francis. See HOLMES and TRIPP, ix

Turner, R. G. The iodine content of certain pathological bloods in a goitrous region (Detroit, Michigan), civ

Tweedy, Wilbur R., and **Torigoe, Masamichi.** Reversible inactivation of the plasma calcium-increasing principle of bovine parathyroid glands, xlviii

U

Ullmann, H. J. See BISCHOFF, MAXWELL, and ULLMANN, cii

Uyei, Nao. See ANDERSON and UYEI, 617

V

Vars, Harry M. See PFIFFNER, VARS, BOTT, and SWINGLE, xlvi

Vickery, Hubert Bradford, Pucher, George W., and **Wakeman, Alfred J.** The determination of nitrate nitrogen in plant tissues, lxxxix

— and **White, Abraham.** The determination of cystine, xviii

—. See HANNA, VICKERY, and PUCHER, 351

—. See PUCHER, VICKERY, and WAKEMAN, 605

du Vigneaud, Vincent. See LORING and DU VIGNEAUD, xxiv

W

Wakeham, Glen, and **Hansen, Louis O.** The basal metabolic rates of vegetarians, 155

Wakeman, Alfred J. See PUCHER, VICKERY, and WAKEMAN, 605

—. See VICKERY, PUCHER, and WAKEMAN, lxxxix

Walden, George B., and **Clowes, G. H. A.** On a method whereby the principle which is effective in the treatment of pernicious anemia may be obtained from liver in substantially larger amount, xi

XUM

Walker, Arthur M., Ellinwood, E. H., and **Reisinger, John A.** Reducing substances and phosphates in glomerular urine, aqueous humor, cerebrospinal fluid, and blood plasma of frogs and *Necturi*, lxxii

Walker, Reed. See NELSON, WALKER, and JONES, vi

Waller, Dorothy S. See WILEY, WILEY, and WALLER, lvi

Waugh, W. A., and **King, C. G.** Isolation and identification of vitamin C, 325

Weber, C. J., Nanninga, J. B., and **Major, Ralph H.** The depressor activity of brain extracts, xcviii

Wendel, William B. The rôle of methemoglobin in methylene blue catalysis of lactic acid oxidation, lxxv

West, Edward S., Norris, R. C., and **Steiner, Alexander.** Nature of the fermentable sugar in normal urine, lxxxii

White, Abraham. See VICKERY and WHITE, xviii

Wiley, Frank H., Wiley, Leona L., and **Waller, Dorothy S.** The effect of the ingestion of sodium, potassium, and ammonium chlorides, lvi

Wiley, Leona L. See WILEY, WILEY, and WALLER, lvi

Wilkerson, Vernon A., and **Gortner, Ross Aiken.** The chemistry of embryonic growth. III. A biochemical study of the embryonic growth of the pig, with special reference to nitrogenous compounds, lxi

Williams, Priscilla. See STADIE, SUNDERMAN, O'BRIEN, and WILLIAMS, xcvii

Wilson, Robert H. The effect of phlorhizin on the rate of absorption from the gastrointestinal tract of the white rat, 497

Wintersteiner, Oskar. See JENSEN and WINTERSTEINER, 93

Woodward, Gladys E., and **Fry, Edith G.** The determination of blood glutathione, 465

Wynne, A. M. See PETT and WYNNE, 177

Y

Young, E. Gordon. See DREYER and YOUNG, lxx

INDEX TO SUBJECTS

A

Absorption:
Gastrointestinal, phlorhizin effect (WILSON) 497
Insulin, intestine (HARNED and NASH) 443

Absorption spectrum:
Amino acids and related substances, substituent groups, influence (ANSLOW and FOSTER) 37

Acid(s):
Determination, plant tissue. I (PUCHER, VICKERY, and WAKEMAN) 605
Plant tissue, determination. I (PUCHER, VICKERY, and WAKEMAN) 605

Acid-base:
Balance, hyperthermia (DALY and KNUDSON) lvii
—, phosphorus metabolism (DALY and KNUDSON) lvii
—, sweat (FISHBERG and BIERMAN) 433
Paths, humans (HASTINGS and SHOCK) lx

Acidity:
Gastric juice, composition and, relation (HOLLANDER) xli

Adrenal:
Cortex, hormone (PFIFFNER, VARS, BOTT, and SWINGLE) xlvi

Adrenalectomy:
Blood plasma phosphates, carbohydrate metabolism, relation (CORI and CORI) lxxxv
— — —, relation (CORI and CORI) lxxxv
Carbohydrate metabolism, muscle, autolyzing (BUELL and STRAUSS) lxv
Phosphates, blood plasma, carbohydrate metabolism, relation (CORI and CORI) lxxxv
Phosphorus metabolism, muscle, autolyzing (BUELL and STRAUSS) lxv

Adsorption:
Protein denaturation, reversibility in (SPIEGEL-ADOLF) xliv

Age:
Blood plasma nitrogen, total, effect (SWANSON and SMITH) 745

Aglucones:
Strophanthidin-related, Ring III (JACOBS and ELDERFIELD) 727

Albumin:
Blood serum, determination (Looney) xxvi
Determination, blood serum (Looney) xxvi
Alkali:
Dipeptides, hydrolysis (Levene, Steiger, and Rothen) 717
Alkaloids:
Ergot. I (Jacobs) 739
Alkalosis:
Work capacity and (Dill, Edwards, and Talbott) lviii
Allyl isothiocyanate:
Sulfur metabolism, influence (Sandberg and Holly) 31
Amine:
Trimethyl-, wheat smut, isolation (Hanna, Vickery, and Pucher) 351
Amino acids:
Absorption spectrum, substituent groups, influence (Anslow and Foster) 37
5-Carbon, growth relation (St. Julian and Rose) xxxi
Hemoglobin regeneration, effect (Keil and Nelson) 115
-Related substances, absorption spectrum, substituent groups, influence (Anslow and Foster) 37
Titration constants, formol titration (Levy) xcii
3-Amino-4-hydroxyphenylarsonic acid:
Derivatives, chemotherapy (Raiziss, Severac, and Clemence) xcviii
Ammonia:
Biological fluids, determination (Folin) 141
Blood, determination (Folin) 141
Determination, biological fluids (Folin) 141
—, blood (Folin) 141
Leucines, isomeric, compounds, dissociation pressures, thermodynamics (Czarnetzky and Schmidt) 333
Ammonium chloride:
Ingestion effect (Wiley, Wiley, and Waller) lvi
Ammonium sulfate:
Protein, soy bean, precipitation (Jones and Csonka) xxix
Androtin:
Distribution, male (McCullagh) xlvii
Anemia:
Development (Mitchell) xv
Glass cage for studies (Skinner, Steenbock, and Peterson) 227
Nutritional (Stucky) xiii
Pernicious, liver, effective principle, preparation (Walden and Clowes) xi

Animal:
Tissue, lipids, unsaturation and composition, relationship (SINCLAIR) xxxiv
Antimony trichloride:
Vitamin A, color reaction (DUBIN and HOOPER) v
Antiprotease:
Insulin protection (HARNED and NASH) 443
Antitrypsin:
Insulin protection (HARNED and NASH) li
Antiurease:
(KIRK and SUMNER) lxxxvii
Apparatus:
Glass cage, anemia studies (SKINNER, STEENBOCK, and PETERSON) 227
Appetite:
Vitamin B_1 effect (GRIFFITH and GRAHAM) vii
— B_2 effect (GRIFFITH and GRAHAM) vii
Aqueous humor:
Phosphates, frog and *Necturus* (WALKER, ELLINWOOD, and REISINGER) lxxii
Reducing substances, frog and *Necturus* (WALKER, ELLINWOOD, and REISINGER) lxxii
Arginine:
Peptic digestion (TORBET and BRADLEY) cx
Arsonic acid:
3-Amino-4-hydroxyphenyl-, derivatives, chemotherapy (RAIZISS, SEVERAC, and CLEMENCE) xcviii
Arthritis:
Cystine (SULLIVAN and HESS) xxv
Aspergillus fischeri:
Ergosterol identification (PRUESS, PETERSON, and FRED) 483
— isolation (PRUESS, PETERSON, and FRED) 483
Mannitol identification (PRUESS, PETERSON, and FRED) 483
— isolation (PRUESS, PETERSON, and FRED) 483
Autoxidation:
Oxidation-reduction systems, rate (BARRON) 287
— —, —, free energy relation (BARRON) 287
Avitaminosis:
XI (SURE) 133
Growth, vitamin B effect (SURE, KIK, and CHURCH) vi
Lipid metabolism, vitamin B effect (SURE, KIK, and CHURCH) vi
Vitamin A (ELVEHJEM and NEU) 71

B

Bacillus:
Tubercle. *See* Tubercle bacillus.
See also Lactobacillus acidophilus.
Bacillus lepræ:
Phosphatide fraction (ANDERSON and UYEI) 617

XUM

Bacterium:
See also Corynebacterium.
Basal metabolism:
Vegetarians (WAKEHAM and HANSEN) 155
Base:
Conservation, diet low in inorganic constituents, mechanism (BROOKE and SMITH) cv
Bean:
Soy, proteins, precipitation, ammonium sulfate (JONES and CSONKA) xxix
Benedict:
Oxycalorimeter, elementary analysis, comparison (ADAMS, BOLLMAN, and BOOTHBY) xci
Benzoic acid(s):
Hydroxy-, conjugation (QUICK) lxix, 403
Methoxy-, conjugation (QUICK) 403
Bilirubin:
Renal threshold (RABINOWITCH) 163
Biological fluids:
Ammonia determination (FOLIN) 141
Biological systems:
Directive influences. II (FALK and MCGUIRE) 651
Bird:
Urates excretion (DREYER and YOUNG) lxx
Uric acid excretion (DREYER and YOUNG) lxx
Blood:
Ammonia determination (FOLIN) 141
Blood—*continued:*
Calcium citrate-like compound (GREENBERG and GREENBERG) ciii
Carbhemoglobin (STADIE, SUNDERMAN, O'BRIEN, and WILLIAMS) xcvii
Carbon monoxide detection (CHRISTMAN) xcvi
Chloride, glucose ingestion effect (MOSENTHAL and BRUGER) lxxxiii
Cholesterol, cyclic variations, women, sterol in diet, effect (OKEY and STEWART) xxxix
—, diurnal variation (BRUGER and SOMACH) 23
Collection, glucose determination (EWING) cvii
Diastase, determination (SOMOGYI) lxxxvi
—, insulin effect (REID) p. l
Ergosterol, irradiated, effect (HESS, LIGHT, FREY, and GROSS) 369
Glucose determinations, collection and preservation of samples (EWING) cvii
—, human, distribution (MACKAY) 685
Glutathione, determination (WOODWARD and FRY) 465
Guanidine, human (ANDES and MYERS) cix
Hemoglobin, infant (ELVEHJEM and PETERSON) xi
Inanition effect (SCHLUTZ and MORSE) lix

XUM

Blood—*continued:*
Iodine determination (Baumann and Metzger) xc
—, pathological, goitrous region (Detroit) (Turner) civ
Lactation effect (Davis and Bodansky) lv
Magnesium deprivation effect (Kruse, Orent, and McCollum) iii
Muscle fatigue, effect (Schlutz and Morse) lix
Nitrogen, non-protein, total, glucose ingestion effect (Mosenthal and Bruger) lxxxiii
Phosphatase, factors influencing (Bodansky, Jaffe, and Chandler) lxvi
Phosphorus distribution, diet effect (Heller, Hunter, and Thompson) 127
— partition (Stare and Elvehjem) 511
—, rickets, partition (Stare and Elvehjem) 511
Pregnancy effect (Davis and Bodansky) lv
Preservation, glucose determination (Ewing) cvii
Protein, partition, scopometry. II (Exton and Rose) xxvii
Urea determination (Campbell) xcvi
—, glucose ingestion effect (Mosenthal and Bruger) lxxxiii
Blood—*continued:*
Yeast, irradiated, effect (Hess, Light, Frey, and Gross) 369
Blood cell:
Freezing point (Collins and Scott) 189
Blood plasma:
Calcium-increasing principle, parathyroid gland, reversible inactivation (Tweedy and Torigoe) xlviii
Nitrogen, total, age effect (Swanson and Smith) 745
Phosphates, carbohydrate metabolism, adrenalectomy, relation (Cori and Cori) lxxxv
—, — — relation (Cori and Cori) lxxxv
—, frog and *Necturus* (Walker, Ellinwood, and Reisinger) lxxii
Phosphorus, acid-soluble, nature (Greenwald and Levy) xci
Reducing substances, frog and *Necturus* (Walker, Ellinwood, and Reisinger) lxxii
Uric acid determination, frog and snake (Bordley and Richards) lxxii
Blood serum:
Albumin determination (Looney) xxvi
Calcium, diffusible, ultrafiltration (Nicholas) 457
—, women (Mull and Bill) lxv

XUM

Blood serum—*continued:*
Freezing point (COLLINS and SCOTT) 189
Globulin determination (LOONEY) xxvi
Phosphorus, inorganic, women (MULL and BILL) lxv
Potassium determination (SOBEL and KRAMER) lxxxix

Brain:
Extracts, depressor activity (WEBER, NANNINGA, and MAJOR) xcviii
Fatty acids, unsaturated, highly, beef (BROWN) 183

Butter:
Fatty acids, unsaturated, highly (ECKSTEIN) xxxv

C

Cage:
Glass, anemia studies (SKINNER, STEENBOCK, and PETERSON) 227

Calcium:
Blood serum, diffusible, ultrafiltration (NICHOLAS) 457
— —, women (MULL and BILL) lxv
Conservation, adult, vitamin D and. I (KLETZIEN, TEMPLIN, STEENBOCK, and THOMAS) 265
Excretion, urine, children (STEARNS) lxiii
—, —, infants (STEARNS) lxiii

Calcium—*continued:*
-Increasing principle, blood plasma, parathyroid gland, reversible inactivation (TWEEDY and TORIGOE) xlviii
-Phosphorus ratio, diet, rickets production (SHOHL, BROWN, ROSE, and SAURWEIN) x

Calcium citrate:
-Like compound, blood (GREENBERG and GREENBERG) ciii

Calorimeter:
Oxy-, Benedict, elementary analysis, comparison (ADAMS, BOLLMAN, and BOOTHBY) xci

Calorimetry:
Animal. XLII (CHAMBERS, KENNARD, POLLACK, and DANN) 525

Cancer:
Hormones in. VII (BISCHOFF, MAXWELL, and ULLMANN) cii

Carbhemoglobin:
Blood (STADIE, SUNDERMAN, O'BRIEN, and WILLIAMS) xcvii

Carbinols:
Methylcyclohexyl-, and homologues, configurational relationship (LEVENE and MARKER) 379
Methylhexyl-, and homologues, configurational relationship (LEVENE and MARKER) 379
Methylphenyl-, and homologues, configurational

XUM

Carbinols—*continued:*
relationship (LEVENE and MARKER) 379
Carbohydrate:
Metabolism, blood plasma phosphates, adrenalectomy, relation (CORI and CORI) lxxxv
—, — — —, relation (CORI and CORI) lxxxv
—, muscle, autolyzing (BUELL and STRAUSS) lxv
—, —, —, adrenalectomy (BUELL and STRAUSS) lxv
—, —, —, hyperthyroidism (BUELL and STRAUSS) lxv
Carbon dioxide:
Cottonseed oil and sodium bicarbonate solutions, distribution (HENDRIX and BERNARDONI) xcv
Sodium bicarbonate solutions and cottonseed oil, distribution (HENDRIX and BERNARDONI) xcv
Carbon monoxide:
Blood, detection (CHRISTMAN) xcvi
Detection, blood (CHRISTMAN) xcvi
Carotene:
Vitamin A source (KLINE, SCHULTZE, and HART) 83
Cerebrospinal fluid:
Phosphates, frog and *Necturus* (WALKER, ELLINWOOD, and REISINGER) lxxii
Cerebrospinal fluid—*continued:*
Reducing substances, frog and *Necturus* (WALKER, ELLINWOOD, and REISINGER) lxxii
Cerevisterol:
(HONEYWELL and BILLS) xxxix
Chemical constitution:
Aglucones, strophanthidin-related, Ring III (JACOBS and ELDERFIELD) 727
Glucose, position (4). I (LEVENE and RAYMOND) 763
Guanosine (LEVENE and TIPSON) 491
5-Methylglucose, Ohle and von Vargha (LEVENE and RAYMOND) 751
Optical rotation and. III (LEVENE and MARKER) 563
Organic compounds, esterase, relation (GLICK) lxvii
— —, lipase, relation (GLICK) lxvii
Peptide hydrolysis rate, relation. VII (LEVENE, STEIGER, and ROTHEN) 717
Physiological response, relation. II (QUICK) 403
Propionic acids, disubstituted, with cyclohexyl group, relationship (LEVENE and MARKER) 563
— —, —, — phenyl group, relationship (LEVENE and MARKER) 563

XUM

Chemical constitution—*continued:*
Strophanthidin, Ring III (JACOBS and ELDERFIELD) 727
Strophanthidin-related aglucones, Ring III (JACOBS and ELDERFIELD) 727
Children:
Calcium excretion, urine (STEARNS) lxiii
Mineral balances, successive (HUNSCHER, COPE, NOLL, MACY, COOLEY, PENBERTHY, and ARMSTRONG) lxiv
Chloride:
Blood, glucose ingestion effect (MOSENTHAL and BRUGER) lxxxiii
Determination, micro (FAIRHALL and HEIM) xciii
Chlorine:
Gastric juice (HOLLANDER) 585
Cholesterol:
Animal organism, destruction (PAGE and MENSCHICK) 359
Blood, cyclic variations, women, sterol in diet, effect (OKEY and STEWART) xxxix
—, diurnal variation (BRUGER and SOMACH) 23
Iodine values, abnormal (RALLS) xxxviii
Clostridium acetobutylicum:
Methylglyoxal formation (PETT and WYNNE) 177
Cobalt:
-Cysteine-hydrogen peroxide complex (SOBEL and KRAMER) lxxxix
Coffee-bean:
Chemistry. I (BENGIS and ANDERSON) 99
Coffee-bean oil:
Kahweol from, properties (BENGIS and ANDERSON) 99
Unsaponifiable matter (BENGIS and ANDERSON) 99
Collagen:
Integument, chemistry (MORSE) xxx
Colloid:
Biological, bound water (GREENBERG) xlv
Copper:
Iron metabolism, action (ELVEHJEM) xvi
Reduction values, mannose (MOORE, LLOYD, and BURGET) 345
Corn-meal:
Protein, body weight, tryptophane supplement, effect (CARY and HUFNAGEL) xxxii
Corynebacterium:
Vitamin A production (SKINNER and GUNDERSON) 53
Cottonseed oil:
Sodium bicarbonate solutions and, carbon dioxide distribution (HENDRIX and BERNARDONI) xcv

Creatine:
Muscle, muscle dystrophy, nutritional (GOETTSCH and BROWN) 549
Cyanide:
Kidney respiration, effect (MUNTWYLER and BINNS) lxxviii
Liver respiration, effect (MUNTWYLER and BINNS) lxxviii
Sugar oxidation, alkaline solution (HARNED and DEERE) lxxxii
Cysteine:
-Cobalt-hydrogen peroxide complex (SOBEL and KRAMER) lxxxix
Cystine:
Arthritis (SULLIVAN and HESS) xxv
Decomposition, acid solution (ANDREWS) xix
Determination (VICKERY and WHITE) xviii
Glutelins (CSONKA) 281
Meso-, isolation and characterization (LORING and DU VIGNEAUD) xxiv
Metabolism (BLOCK and JACKSON) cvi
Oxidation, acid solution (ANDREWS) 657
Racemization, acid solution (ANDREWS) xix
Sulfite action upon (CLARKE) 235

D

Depressor:
Activity, brain extracts (WEBER, NANNINGA, and MAJOR) xcviii
Dermatitis:
-Preventing vitamin, ultraviolet rays, effect (HOGAN and RICHARDSON) vii
Diastase:
Blood, determination (SOMOGYI) lxxxvi
—, insulin effect (REID) p. 1
Determination, blood (SOMOGYI) lxxxvi
Diet:
Blood phosphorus distribution, effect (HELLER, HUNTER, and THOMPSON) 127
Calcium-phosphorus ratio, rickets production (SHOHL, BROWN, ROSE, and SAURWEIN) x
Fatty acids, unsaturated, deficient, gas exchange, effect (BURR and BEBER) xxxvi
Goiter, relation. I (LEVINE) c
II (REMINGTON) ci
—, technique (LEVINE) c
Hemorrhagic disease and (KUGELMASS) xii
Inorganic constituents, low, base conservation, mechanism (BROOKE and SMITH) cv
Liver, kidney insufficiency, nephrectomy, partial. effect (CHANUTIN) ciii
Liver-containing, fatty livers, occurrence (BLATHERWICK, MEDLAR, BRADSHAW, POST, and SAWYER) xxxiii

XUM

Diet—*continued:*
Sterol in, blood cholesterol, cyclic variations, women, effect (Okey and Stewart) xxxix
See also Food, Nutrition, Ration.
Digestion:
Peptic, arginine unmasking (Torbet and Bradley) cx
Dihydroxystearic acid:
Free, *Lactobacillus acidophilus* fat (Crowder and Anderson) 393
Dipeptide(s):
Alkali hydrolysis (Levene, Steiger, and Rothen) 717
Dissociation pressures:
Leucines, isomeric, ammonia, compounds, thermodynamics (Czarnetzky and Schmidt) 333
—, —, hydrogen chloride, compounds, thermodynamics (Czarnetzky and Schmidt) 333
Disulfides:
Oxidation (Shinohara) xxii

E

Egg:
White, toxicity, heat effect (Parsons) xxx
Egg-shell:
Keratin (Calvery) xxvi
Electric current:
Tissue, human, conductivity (Hemingway and McClendon) xcix
Electrical conductivity:
Tissue, human, alternating currents (Hemingway and McClendon) xcix
Elements:
Hemoglobin regeneration, effect (Keil and Nelson) 115
Embryo:
Growth, chemistry. III (Wilkerson and Gortner) lxi
—, nitrogen compounds in (Wilkerson and Gortner) lxi
Emmenin:
Estrogenic hormones, relation (Collip, Browne, and Thomson) xvii
Energy:
Free, oxidation-reduction systems, autoxidation rate, relation (Barron) 287
Requirement, irradiated milk, rickets prevention (Supplee, Bender, and Dorcas) 63
Enzyme:
See also Antiprotease, Antitrypsin, Antiurease, Diastase, Esterase, α-Hydroxyoxidase, Lipase, Phosphatase.
Ergosterol:
Identification, *Aspergillus fischeri* (Pruess, Peterson, and Fred) 483
Irradiated, blood effect (Hess, Light, Frey, and Gross) 369
—, excreta effect (Hess, Light, Frey, and Gross) 369

Ergosterol—*continued:*
Irradiated, milk effect (Hess, Light, Frey, and Gross) 369
—, vitamin D, fish liver oils, natural, comparison (Steenbock, Kletzien, and Halpin) 249
Isolation, *Aspergillus fischeri* (Pruess, Peterson, and Fred) 483
Yeast, cerevisterol accompanying (Honeywell and Bills) xxxix
Ergot:
Alkaloids. I (Jacobs) 739
Ergotinine:
Oxidation (Jacobs) 739
Esterase:
Organic compounds, chemical constitution, relation (Glick) lxvii
Estrus:
Hormones, emmenin, relation (Collip, Browne, and Thomson) xvii
Ethyl iodide:
Determination (Cool) 47
Ethyl isothiocyanate:
Sulfur metabolism, influence (Sandberg and Holly) 31
Ethyl thiocyanate:
Sulfur metabolism influence (Sandberg and Holly) 31
Excreta:
Ergosterol, irradiated, effect (Hess, Light, Frey, and Gross) 369
Excreta—*continued:*
Yeast, irradiated, effect (Hess, Light, Frey, and Gross) 369
Excretion:
Calcium, urine, children (Stearns) lxiii
—, —, infants (Stearns) lxiii
Methyl uric acids, methylated xanthines ingestion effect (Hanzal and Myers) lxix
Urates, bird (Dreyer and Young) lxx
Uric acid, bird (Dreyer and Young) lxx
Exercise:
Respiratory metabolism, pancreatectomy (Chambers, Kennard, Pollack, and Dann) 525

F

Fat:
Lactobacillus acidophilus, dihydroxystearic acid, free (Crowder and Anderson) 393
Fatigue:
Muscle, blood changes, effect (Schlutz and Morse) lix
Fatty acid(s):
Brain, unsaturated, highly, beef (Brown) 183
Esters, nutritive value (Cox) xxxvii
Lecithin, liver (Snider and Bloor) xxxiii
Nutrition. III (Burr, Burr, and Miller) 1

XUM

Fatty acid(s)—*continued:*
Unsaturated, diet deficient in, gas exchange, effect (BURR and BEBER) xxxvi
—, highly, brain, beef (BROWN) 183
—, —, butter (ECKSTEIN) xxxv
Fermentation:
Yeast, monoiodoacetate influence (EHRENFEST) lxxvi
Fish:
Liver oils, natural, vitamin D, irradiated ergosterol, comparison (STEENBOCK, KLETZIEN, and HALPIN) 249
— —, —, — D, irradiated yeast, comparison (STEENBOCK, KLETZIEN, and HALPIN) 249
Food:
Iodine determination (BAUMANN and METZGER) xc
Specific dynamic action, snake, king (KOCHER) lxxi
Utilization, vitamin B_1 effect (GRIFFITH and GRAHAM) vii
—, — B_2 effect (GRIFFITH and GRAHAM) vii
Formol:
Titration, titration constants, amino acids (LEVY) xcii
Freezing point:
Blood cell (COLLINS and SCOTT) 189
Freezing point—*continued:*
Blood serum (COLLINS and SCOTT) 189
Frog:
Aqueous humor, phosphates (WALKER, ELLINWOOD, and REISINGER) lxxii
— —, reducing substances (WALKER, ELLINWOOD, and REISINGER) lxxii
Blood plasma, phosphates (WALKER, ELLINWOOD, and REISINGER) lxxii
— —, reducing substances (WALKER, ELLINWOOD, and REISINGER) lxxii
— —, uric acid determination (BORDLEY and RICHARDS) lxxii
Cerebrospinal fluid, phosphates (WALKER, ELLINWOOD, and REISINGER) lxxii
— —, reducing substances (WALKER, ELLINWOOD, and REISINGER) lxxii
Muscle, metabolism, anaerobic, hydrogen ion concentration effect (KERLY and RONZONI) lxxiv
Urine, glomerular, phosphates (WALKER, ELLINWOOD, and REISINGER) lxxii
—, —, reducing substances (WALKER, ELLINWOOD, and REISINGER) lxxii
—, —, uric acid determination (BORDLEY and RICHARDS) lxxii
***d*-Fructose:**
d-Glucose transformation by

d-**Fructose**—*continued:*
pyridine (Austin and Prusait) lxxx

G

Galactose:
Utilization, liver removal (Power) lxxxiii
Gas:
Exchange, fatty acids, unsaturated, diet deficient in, effect (Burr and Beber) xxxvi
Gastrointestinal tract:
Absorption, phlorhizin effect (Wilson) 497
Temperature (Hepburn, Eberhard, Ricketts, and Rieger) xliii
Globulin:
Blood serum, determination (Looney) xxvi
Determination, blood serum (Looney) xxvi
Glomerulus:
Urine, phosphates, frog and *Necturus* (Walker, Ellinwood, and Reisinger) lxxii
—, reducing substances, frog and *Necturus* (Walker, Ellinwood, and Reisinger) lxxii
—, uric acid determination, frog and snake (Bordley and Richards) lxxii
Glucose:
Blood chloride, ingestion effect (Mosenthal and Bruger) lxxxiii
—, determinations, collection and preservation of samples (Ewing) cvii
Glucose—*continued:*
Blood, human, distribution (MacKay) 685
— non-protein nitrogen, total, ingestion effect (Mosenthal and Bruger) lxxxiii
— urea, ingestion effect (Mosenthal and Bruger) lxxxiii
Determination, blood collection (Ewing) cvii
—, — preservation (Ewing) cvii
5-Methyl-, Ohle and von Vargha, chemical constitution (Levene and Raymond) 751
Substitution, position (4). I (Levene and Raymond) 763
d-**Glucose:**
d-Fructose, transformation by pyridine (Austin and Prusait) lxxx
Glutamic acid:
Insulin, crystalline, isolation (Jensen and Winterstein) 93
Glutathione:
Blood, determination (Woodward and Fry) 465
Determination, blood (Woodward and Fry) 465
Glutelins:
VII (Csonka) 281
Cystine (Csonka) 281
Tryptophane (Csonka) 281
Tyrosine (Csonka) 281

XUM

Glyoxal:
Methyl-, formation, *Clostridium acetobutylicum* (Pett and Wynne) 177

Goiter:
Diet relation. I (Levine) c
II (Remington) ci
Dietary technique (Levine) c
Region (Detroit), blood, pathological, iodine (Turner) civ

Gonococci:
α-Hydroxyoxidase, lactic acid oxidation, mechanism (Barron and Hastings) lxxiii
Oxidations by (Barron and Miller) 691

Growth:
Amino acids, 5-carbon, relation (St. Julian and Rose) xxxi
Embryo, chemistry. III (Wilkerson and Gortner) lxi
—, nitrogen compounds in (Wilkerson and Gortner) lxi
Metabolism, relation (Cerecedo and Stekol) lx
-Promoting principle, anterior pituitary, neoplasm growth, effect (Bischoff, Maxwell, and Ullmann) cii
Statistical interpretation (Sherman and Campbell) iii

Growth—*continued:*
Vitamin A, carotene as source (Kline, Schultze, and Hart) 83
— —, xanthophyll as source (Kline, Schultze, and Hart) 83
— B concentrates, effect (Sure) 133
— — effect, avitaminosis (Sure, Kik, and Church) vi

Guanidine:
Blood, human (Andes and Myers) cix

Guanosine:
Ring structure (Levene and Tipson) 491

H

Heat:
Egg white toxicity, effect (Parsons) xxx

Hemoglobin:
Blood, infant (Elvehjem and Peterson) xi
Regeneration, amino acids, effect (Keil and Nelson) 115
—, chemical elements, effect (Keil and Nelson) 115
—, hydrochloric acid, effect (Keil and Nelson) 115

Hemolysis:
Sodium chloride, chemically pure, silver in, hemolytic action (Ball) xciv

Hemorrhage:
Diet relation (Kugelmass) xii

XUM

Homogentisic acid:
Oxidation-reduction system, physiological (Fishberg and Dolin) lxxxviii
Hydantoins:
5,5′-Phenylethyl-, optically active (Sobotka, Peck, and Kahn) lxxix
Hydrochloric acid:
Hemoglobin regeneration, effect (Keil and Nelson) 115
Hydrogen chloride:
Leucines, isomeric, compounds, dissociation pressures, thermodynamics (Czarnetzky and Schmidt) 333
Hydrogen ion concentration:
Muscle, metabolism, anaerobic, frog, effect (Kerly and Ronzoni) lxxiv
Hydroxybenzoic acids:
Conjugation (Quick) lxix, 403
α-Hydroxyoxidase:
Gonococci, lactic acid oxidation, mechanism (Barron and Hastings) lxxiii
Hyperthermia:
Acid-base balance (Daly and Knudson) lvii
Phosphorus metabolism (Daly and Knudson) lvii
Hyperthyroidism:
Carbohydrate metabolism, muscle, autolyzing (Buell and Strauss) lxv
Phosphorus metabolism, muscle, autolyzing (Buell and Strauss) lxv

I

Inanition:
Blood changes, effect (Schlutz and Morse) lix
Infant:
Calcium excretion, urine (Stearns) lxiii
Hemoglobin, blood (Elvehjem and Peterson) xi
Inorganic constituents:
Diet low in, base conservation, mechanism (Brooke and Smith) cv
Insulin:
Absorption, intestine (Harned and Nash) 443
Antiproteases, protection (Harned and Nash) 443
Antitrypsin, protection (Harned and Nash) li
Blood diastase, effect (Reid) p. 1
Chemistry (Jensen and Evans) xlviii
Crystalline. XIV (Jensen and Wintersteiner) 93
—, glutamic acid isolation (Jensen and Wintersteiner) 93
Phosphorus, muscle, compounds (Kerr and Blish) 11
Integument:
Chemistry. IV (Morse) xxx
Collagen, chemistry (Morse) xxx

XUM

Intestine:
Insulin absorption (Harned and Nash) 443
Juice secretion, humoral influence (Pierce, Nasset, and Murlin) xlii
Loop, transplanted. II (Pierce, Nasset, and Murlin) xlii
Iodine:
Blood, determination (Baumann and Metzger) xc
—, pathological, goitrous region (Detroit) (Turner) civ
Determination, blood (Baumann and Metzger) xc
—, food (Baumann and Metzger) xc
—, tissues (Baumann and Metzger) xc
Food, determination (Baumann and Metzger) xc
Requirement (Remington) ci
Thyroid gland iodine, administration effect (Gutman, Benedict, Baxter, and Palmer) 303
— — thyroxine, administration effect (Gutman, Benedict, Baxter, and Palmer) 303
Tissues, determination (Baumann and Metzger) xc
Iodine number:
Cholesterol (Ralls) xxxviii
Iodoacetate:
Mono-, yeast fermentation (Ehrenfest) lxxvi
—, — oxidation (Ehrenfest) lxxvi
Iron:
Metabolism, copper action (Elvehjem) xvi
Retention, pregnancy (Coons) 215
Irradiation:
Ergosterol, blood effect (Hess, Light, Frey, and Gross) 369
—, excreta effect (Hess, Light, Frey, and Gross) 369
—, milk effect (Hess, Light, Frey, and Gross) 369
—, vitamin D, fish liver oils, natural, comparison (Steenbock, Kletzien, and Halpin) 249
Milk, rickets prevention, energy requirement (Supplee, Bender, and Dorcas) 63
Yeast, blood effect (Hess, Light, Frey, and Gross) 369
—, excreta effect (Hess, Light, Frey, and Gross) 369
—, milk effect (Hess, Light, Frey, and Gross) 369
—, vitamin D, fish liver oils, natural, comparison (Steenbock, Kletzien, and Halpin) 249

XUM

K

Kahweol:
Coffee-bean oil, unsaponifiable matter, preparation and properties (Bengis and Anderson) 99

Keratin:
Egg-shell (Calvery) xxvi

Kidney:
Bilirubin, threshold (Rabinowitch) 163
Function, water and urea, relation (Gamble, McKhann, and Butler) lvii
Insufficiency, nephrectomy, partial, liver diet effect (Chanutin) ciii
Respiration, cyanide effect (Muntwyler and Binns) lxxviii

Kynurenic acid:
Production, optical activity influence (Berg) lxviii

L

Lactation:
Blood, effect (Davis and Bodansky) lv

Lactic acid:
Oxidation, α-hydroxyoxidase, gonococci, mechanism (Barron and Hastings) lxxiii
—, methylene blue as catalyst, methemoglobin rôle (Wendel) lxxv

Lactobacillus acidophilus:
Chemistry. I (Crowder and Anderson) 393

Lactobacillus acidophilus—*continued:*
Fat, dihydroxystearic acid, free (Crowder and Anderson) 393

Lecithin:
Liver, fatty acids (Snider and Bloor) xxxiii

Lettuce:
Vitamin E concentrate, preparation and properties (Olcott) x

Leucine:
Isomeric, ammonia, compounds, dissociation pressures, thermodynamics (Czarnetzky and Schmidt) 333
—, hydrogen chloride, compounds, dissociation pressures, thermodynamics (Czarnetzky and Schmidt) 333
Nor-, identity (Czarnetzky and Schmidt) 333
—, isolation (Czarnetzky and Schmidt) 333

Lipase:
Organic compounds, chemical constitution, relation (Glick) lxvii
Pancreas, activation, mechanism (Glick and King) 675
—, —, surface effects, relationship (Glick and King) 675
Pneumococcus Types I and II, actions (Falk and McGuire) 651

Lipid(s):
Metabolism, avitaminosis, vitamin B effect (Sure,

XUM

Lipid(s)—*continued:*
KIK, and CHURCH) vi
Tissue, animal, unsaturation and composition, relationship (SINCLAIR) xxxiv
Tubercle bacillus, chemistry. XXVII (ANDERSON and UYEI) 617
XXVIII (ANDERSON) 639
Unsaponifiable, liver, beef (FREYTAG and SMITH) xxxviii

Liquor folliculi:
Extracts, theelin, comparison (CURTIS) liv
—, theelol, comparison (CURTIS) liv

Liver:
Anemia, pernicious, effective principle, preparation (WALDEN and CLOWES) xi
-Containing diet, fatty livers, occurrence (BLATHERWICK, MEDLAR, BRADSHAW, POST, and SAWYER) xxxiii
Diet, kidney insufficiency, nephrectomy, partial, effect (CHANUTIN) ciii
Fatty, liver-containing diets, occurrence (BLATHERWICK, MEDLAR, BRADSHAW, POST, and SAWYER) xxxiii
Galactose utilization following removal (POWER) lxxxiii
Lecithin, fatty acids (SNIDER and BLOOR) xxxiii

Liver—*continued:*
Lipids, unsaponifiable, beef (FREYTAG and SMITH) xxxviii
Oils, fish, natural, vitamin D, irradiated ergosterol, comparison (STEENBOCK, KLETZIEN, and HALPIN) 249
—, —, —, — D, irradiated yeast, comparison (STEENBOCK, KLETZIEN, and HALPIN) 249
Respiration, cyanide effect (MUNTWYLER and BINNS) lxxviii
Vitamin A transfer rate to (NELSON, WALKER, and JONES) vi

Lusk, Graham:
Obituary, preceding p. 605

M

Magnesium:
Deprivation, blood changes (KRUSE, ORENT, and MCCOLLUM) iii

Mannitol:
Identification, *Aspergillus fischeri* (PRUESS, PETERSON, and FRED) 483
Isolation, *Aspergillus fischeri* (PRUESS, PETERSON, and FRED) 483

Mannose:
Copper reduction values (MOORE, LLOYD, and BURGET) 345

Mercury:
Filtrates, alkaline, nitrogen (EVERETT and SHEPPARD) lxxxi

Mesocystine:
Characterization (Loring and du Vigneaud) xxiv
Isolation (Loring and du Vigneaud) xxiv
Metabolism:
Basal. *See* Basal metabolism.
Carbohydrate, blood plasma phosphates, adrenalectomy, relation (Cori and Cori) lxxxv
—, — — —, relation (Cori and Cori) lxxxv
—, muscle, autolyzing (Buell and Strauss) lxv
Cystine (Block and Jackson) cvi
Growth relation (Cerecedo and Stekol) lx
Iron, copper action (Elvehjem) xvi
Lipid, avitaminosis, vitamin B effect (Sure, Kik, and Church) vi
Methionine (Block and Jackson) cvi
Muscle, anaerobic, frog, hydrogen ion concentration effect (Kerly and Ronzoni) lxxiv
Phosphorus, hyperthermia (Daly and Knudson) lvii
—, muscle, autolyzing (Buell and Strauss) lxv
—, —, —, adrenalectomy (Buell and Strauss) lxv
Metabolism—*continued:*
Phosphorus, muscle, autolyzing, hyperthyroidism (Buell and Strauss) lxv
—, — disease (Brand and Harris) lxii
Respiratory. *See* Respiratory metabolism.
Sulfur, allyl isothiocyanate influence (Sandberg and Holly) 31
—, ethyl isothiocyanate influence (Sandberg and Holly) 31
—, — thiocyanate influence (Sandberg and Holly) 31
Total, snake, king (Kocher) lxxi
Methemoglobin:
Lactic acid oxidation, methylene blue as catalyst (Wendel) lxxv
Methionine:
Decomposition, thermal, acid solution (Butz) xxi
Determination, proteins (Baernstein) 663
Metabolism (Block and Jackson) cvi
Proteins, determination (Baernstein) 663
Methoxybenzoic acid:
Conjugation (Quick) 403
Methylcyclohexylcarbinols:
Configurational relationship (Levene and Marker) 379
Homologues, configurational relationship (Levene and Marker) 379

XUM

Methylene blue:
Lactic acid oxidation, methemoglobin rôle in catalysis by (WENDEL) lxxv
5-Methylglucose:
Ohle and von Vargha, chemical constitution (LEVENE and RAYMOND) 751
Methylglyoxal:
Formation, *Clostridium acetobutylicum* (PETT and WYNNE) 177
Methylhexylcarbinols:
Configurational relationship (LEVENE and MARKER) 379
Homologues, configurational relationship (LEVENE and MARKER) 379
Methylphenylcarbinols:
Configurational relationship (LEVENE and MARKER) 379
Homologues, configurational relationship (LEVENE and MARKER) 379
Methyl uric acid:
Excretion, methylated xanthines ingestion effect (HANZAL and MYERS) lxix
Milk:
Ergosterol effect, irradiated (HESS, LIGHT, FREY, and GROSS) 369
Irradiated, rickets prevention, energy requirement (SUPPLEE, BENDER, and DORCAS) 63
Yeast, irradiated, effect (HESS, LIGHT, FREY, and GROSS) 369
Mineral:
Balances, successive, childhood (HUNSCHER, COPE, NOLL, MACY, COOLEY, PENBERTHY, and ARMSTRONG) lxiv
Monoiodoacetate:
Yeast fermentation, influence (EHRENFEST) lxxvi
— oxidation, influence (EHRENFEST) lxxvi
Mucilage:
Quince seed (RENFREW and CRETCHER) 503
Muscle:
Autolyzing, carbohydrate metabolism (BUELL and STRAUSS) lxv
—, — —, adrenalectomy (BUELL and STRAUSS) lxv
—, — —, hyperthyroidism (BUELL and STRAUSS) lxv
—, phosphorus metabolism (BUELL and STRAUSS) lxv
—, — —, adrenalectomy (BUELL and STRAUSS) lxv
—, — —, hyperthyroidism (BUELL and STRAUSS) lxv
Creatine, muscle dystrophy, nutritional (GOETTSCH and BROWN) 549
Disease, phosphorus metabolism (BRAND and HARRIS) lxii
Dystrophy, nutritional, muscle creatine (GOETTSCH and BROWN) 549

XUM

Muscle—*continued:*
Fatigue, blood changes, effect (SCHLUTZ and MORSE) lix
Frog, metabolism, anaerobic, hydrogen ion concentration effect (KERLY and RONZONI) lxxiv
Phosphorus compounds, insulin effect (KERR and BLISH) 11

N

Necturus:
Aqueous humor, phosphates (WALKER, ELLINWOOD, and REISINGER) lxxii
— —, reducing substances (WALKER, ELLINWOOD, and REISINGER) lxxii
Blood plasma, phosphates (WALKER, ELLINWOOD, and REISINGER) lxxii
— —, reducing substances (WALKER, ELLINWOOD, and REISINGER) lxxii
Cerebrospinal fluid, phosphates (WALKER, ELLINWOOD, and REISINGER) lxxii
— —, reducing substances (WALKER, ELLINWOOD, and REISINGER) lxxii
Urine, glomerular, phosphates (WALKER, ELLINWOOD, and REISINGER) lxxii
—, —, reducing substances (WALKER, ELLINWOOD, and REISINGER) lxxii
Neoplasm:
Growth, anterior pituitary growth-promoting principle, effect (BISCHOFF, MAXWELL, and ULLMANN) cii
Neuritis:
Antineuritic vitamin. III. (BLOCK and COWGILL) 421
— —, purification (BLOCK and COWGILL) 421
Nitrate:
Nitrogen, determination, plant tissues (VICKERY, PUCHER, and WAKEMAN) lxxxix
—, plant tissues, determination (VICKERY, PUCHER, and WAKEMAN) lxxxix
Nitric acid:
Determination, plant tissue (PUCHER, VICKERY, and WAKEMAN) 605
Plant tissue, determination (PUCHER, VICKERY, and WAKEMAN) 605
Nitrogen:
Balance, pituitary, anterior, extracts, effect (GAEBLER) li
Compounds, embryo growth (WILKERSON and GORTNER) lxi
Mercury filtrates, alkaline (EVERETT and SHEPPARD) lxxxi
Nitrate, determination, plant tissues (VICKERY, PUCHER, and WAKEMAN) lxxxix
—, plant tissues, determination (VICKERY, PUCHER, and WAKEMAN) lxxxix

XUM

Nitrogen—*continued:*
Non-protein, total, blood, glucose ingestion effect (MOSENTHAL and BRUGER) lxxxiii
Total, blood plasma, age effect (SWANSON and SMITH) 745
Norleucine:
Identity (CZARNETZKY and SCHMIDT) 333
Isolation (CZARNETZKY and SCHMIDT) 333
Nutrition:
Fatty acid esters, pure, value (COX) xxxvii
— acids. III (BURR, BURR, and MILLER) 1

O

Obituary:
Lusk, Graham, preceding p. 605
Ohle-von Vargha:
5-Methylglucose, chemical constitution (LEVENE and RAYMOND) 751
Oil:
Coffee-bean. *See* Coffee-bean oil.
Fish liver, natural, vitamin D, irradiated ergosterol, comparison (STEENBOCK, KLETZIEN, and HALPIN) 249
— —, —, — D, irradiated yeast, comparison (STEENBOCK, KLETZIEN, and HALPIN) 249
Optical activity:
Kynurenic acid production, influence (BERG) lxviii
Optical rotation:
Chemical constitution and. III (LEVENE and MARKER) 563
Organic compounds:
Chemical constitution, esterase, relation (GLICK) lxvii
— —, lipase, relation (GLICK) lxvii
Oxidase:
α-Hydroxy-, gonococci, lactic acid oxidation, mechanism (BARRON and HASTINGS) lxxiii
Oxidation(s):
Biological. I (BARRON and MILLER) 691
Cystine, acid solution (ANDREWS) 657
Disulfides (SHINOHARA) xxii
Ergotinine (JACOBS) 739
Gonococci-produced (BARRON and MILLER) 691
Lactic acid, α-hydroxyoxidase, gonococci, mechanism (BARRON and HASTINGS) lxxiii
— —, methylene blue, methemoglobin rôle (WENDEL) lxxv
Sugars, alkaline solution, cyanide (HARNED and DEERE) lxxxii
Yeast, monoiodoacetate influence (EHRENFEST) lxxvi
See also Autoxidation.
Oxidation-reduction:
System, autoxidation rate (BARRON) 287

Oxidation-reduction—*continued:*
System, autoxidation rate, free energy relation (BARRON) 287
—, homogentisic acid (FISHBERG and DOLIN) lxxxviii
Oxycalorimeter:
Benedict, elementary analysis, comparison (ADAMS, BOLLMAN, and BOOTHBY) xci

P

Pancreas:
Lipase, activation, surface effects, relationship (GLICK and KING) 675
Pancreatectomy:
Respiratory metabolism, exercise (CHAMBERS, KENNARD, POLLACK, and DANN) 525
— —, recovery from exercise (CHAMBERS, KENNARD, POLLACK, and DANN) 525
Parathyroid:
Gland, blood plasma calcium-increasing principle, reversible inactivation (TWEEDY and TORIGOE) xlviii
Hormone action, mechanism (THOMSON and PUGSLEY) xcvii
Pepsin:
Digestion, arginine in (TORBET and BRADLEY) cx
Peptide(s):
Chemical constitution, hydrolysis rate, relation. VII (LEVENE, STEIGER, and ROTHEN) 717
Di-, alkali hydrolysis (LEVENE, STEIGER, and ROTHEN) 717
5,5′-Phenylethylhydantoins:
Optically active (SOBOTKA, PECK, and KAHN) lxxix
Phlorhizin:
Gastrointestinal absorption, effect (WILSON) 497
Phosphatase:
Blood, factors influencing (BODANSKY, JAFFE, and CHANDLER) lxvi
Phosphates:
Aqueous humor, frog and *Necturus* (WALKER, ELLINWOOD, and REISINGER) lxxii
Blood plasma, carbohydrate metabolism, adrenalectomy, relation (CORI and CORI) lxxxv
— —, — — relation (CORI and CORI) lxxxv
— —, frog and *Necturus* (WALKER, ELLINWOOD, and REISINGER) lxxii
Cerebrospinal fluid, frog and *Necturus* (WALKER, ELLINWOOD, and REISINGER) lxxii
Urine, glomerular, frog and *Necturus* (WALKER, ELLINWOOD, and REISINGER) lxxii
Phosphatide:
Bacillus lepræ, fraction

Phosphatide—*continued:*
(Anderson and Uyei) 617
Phosphorus:
Acid-soluble, blood plasma, nature (Greenwald and Levy) xci
Blood, distribution, diet effect (Heller, Hunter, and Thompson) 127
—, partition (Stare and Elvehjem) 511
—, rickets, partition (Stare and Elvehjem) 511
Calcium-, ratio, diet, rickets production (Shohl, Brown, Rose, and Saurwein) x
Inorganic, blood serum, women (Mull and Bill) lxv
Metabolism, hyperthermia (Daly and Knudson) lvii
—, muscle, autolyzing (Buell and Strauss) lxv
—, —, —, adrenalectomy (Buell and Strauss) lxv
—, —, —, hyperthyroidism (Buell and Strauss) lxv
—, — disease (Brand and Harris) lxii
Muscle, insulin effect (Kerr and Blish) 11
Phthioic acid:
Tubercle bacillus, human, levorotatory acid in (Anderson) 639
Pituitary:
Anterior, and male hormone, effect (Funk and Harrow) cviii
Anterior, extracts, nitrogen balance, effect (Gaebler) li
—, —, urine volume, effect (Gaebler) li
—, growth-promoting principle, neoplasm growth, effect (Bischoff, Maxwell, and Ullmann) cii
-Like substance, anterior, urine, pregnancy (Katzman and Doisy) lii
Plant:
Tissue, acids, determination. I (Pucher, Vickery, and Wakeman) 605
—, nitrate nitrogen determination (Vickery, Pucher, and Wakeman) lxxxix
—, nitric acid determination (Pucher, Vickery, and Wakeman) 605
Pneumococcus:
Type I, lipase actions (Falk and McGuire) 651
— II, lipase actions (Falk and McGuire) 651
Poison:
Toad, chemistry (Jensen and Chen) cx
Potassium:
Blood serum, determination (Sobel and Kramer) lxxxix
Determination, blood serum (Sobel and Kramer) lxxxix
Potassium chloride:
Ingestion effect (Wiley,

Potassium chloride—*continued:*
WILEY, and WALLER) lvi
Pregnancy:
Blood, effect (DAVIS and BODANSKY) lv
Iron retention (COONS) 215
Urine, pituitary-like substance, anterior (KATZMAN and DOISY) lii
Propionic acids:
Disubstituted, with cyclohexyl group, configurational relationship (LEVENE and MARKER) 563
—, — phenyl group, configurational relationship (LEVENE and MARKER) 563
Protein:
Blood, partition, scopometry. II (EXTON and ROSE) xxvii
Corn-meal, body weight, tryptophane supplement, effect (CARY and HUFNAGEL) xxxii
Denaturation, reversibility, adsorption (SPIEGEL-ADOLF) xliv
—, —, elution (SPIEGEL-ADOLF) xliv
Methionine determination (BAERNSTEIN) 663
Requirements, mouse (BING, ADAMS, and BOWMAN) cvii
Soy bean, precipitation, ammonium sulfate (JONES and CSONKA) xxix
Protein—*continued:*
Sulfur distribution (BAERNSTEIN) xxv, 669
Pyridine:
d-Glucose transformation to *d*-fructose by (AUSTIN and PRUSAIT) lxxx

Q

Quince:
Seed, mucilage (RENFREW and CRETCHER) 503

R

Ration:
Rachitogenic, factors influencing (HOLMES and TRIPP) ix
See also Diet, Food, Nutrition.
Ray:
Ultra-violet, dermatitis-preventing vitamin, effect (HOGAN and RICHARDSON) vii
Reducing substances:
Aqueous humor, frog and *Necturus* (WALKER, ELLINWOOD, and REISINGER) lxxii
Blood plasma, frog and *Necturus* (WALKER, ELLINWOOD, and REISINGER) lxxii
Cerebrospinal fluid, frog and *Necturus* (WALKER, ELLINWOOD, and REISINGER) lxxii
Urine, glomerular, frog and *Necturus* (WALKER, ELLINWOOD, and REISINGER) lxxii

XUM

Reduction:
Copper, values, mannose (Moore, Lloyd, and Burget) 345
Respiration:
Kidney, cyanide effect (Muntwyler and Binns) lxxviii
Liver, cyanide effect (Muntwyler and Binns) lxxviii
Respiratory metabolism:
Pancreatectomy, exercise (Chambers, Kennard, Pollack, and Dann) 525
—, recovery from exercise (Chambers, Kennard, Pollack, and Dann) 525
Retention:
Iron, pregnancy (Coons) 215
Rickets:
Blood phosphorus, partition (Stare and Elvehjem) 511
Calcium-phosphorus ratio, diet, production effect (Shohl, Brown, Rose, and Saurwein) x
Prevention, milk, irradiated, energy requirement (Supplee, Bender, and Dorcas) 63
Rachitogenic ration, factors influencing (Holmes and Tripp) ix

S

Saccharinic acid:
Formation, mechanism (Nicolet) lxxx
Secretion:
Gastric, parietal, properties (Hollander) xli
Seed:
Quince, mucilage (Renfrew and Cretcher) 503
Sex:
Hormone, male. V (Funk and Harrow) cviii
—, —, and pituitary, anterior, effect (Funk and Harrow) cviii
—. *See also* Androtin, Emmenin, Theelin, Theelol.
Silver:
Hemolytic action, impurity in sodium chloride, chemically pure (Ball) xciv
Skin:
See also Integument.
Snake:
Blood plasma, uric acid determination (Bordley and Richards) lxxii
King, metabolism, total (Kocher) lxxi
—, specific dynamic action, food (Kocher) lxxi
Urine, glomerular, uric acid determination (Bordley and Richards) lxxii
Sodium bicarbonate:
Solutions, and cottonseed oil, carbon dioxide distribution (Hendrix and Bernardoni) xcv
Sodium chloride:
Hemolytic action, silver in chemically pure (Ball) xciv
Ingestion effect (Wiley,

XUM

Sodium chloride—*continued:*
WILEY, and WALLER) lvi
Soy bean:
See Bean.
Specific dynamic action:
Food, snake, king (KOCHER) lxxi
Statistics:
Growth, interpretation (SHERMAN and CAMPBELL) iii
Stearic acid:
Dihydroxy-, free, *Lactobacillus acidophilus* fat (CROWDER and ANDERSON) 393
Sterol:
Cerevisterol, yeast ergosterol accompaniment (HONEYWELL and BILLS) xxxix
Dietary, blood cholesterol, cyclic variations, women, effect (OKEY and STEWART) xxxix
Stomach:
Gastric juice, acidity and composition, relation (HOLLANDER) xli
— — chlorine (HOLLANDER) 585
— —, parietal, properties (HOLLANDER) xli
— secretion. IV (HOLLANDER) 585
Strophanthidin:
Dehydrogenation (JACOBS and FLECK) 57
-Related substances, Ring III (JACOBS and ELDERFIELD) 727
Strophanthidin—*continued:*
Ring III (JACOBS and ELDERFIELD) 727
Strophanthin:
XXVI (JACOBS and FLECK) 57
XXVII (JACOBS and ELDERFIELD) 727
Sugar(s):
Fermentable, urine, normal, nature (WEST, NORRIS, and STEINER) lxxxii
Oxidation, alkaline solution, cyanide (HARNED and DEERE) lxxxii
Sulfite:
Cystine, action upon (CLARKE) 235
Sulfur:
Metabolism, allyl isothiocyanate influence (SANDBERG and HOLLY) 31
—, ethyl isothiocyanate influence (SANDBERG and HOLLY) 31
—, — thiocyanate influence (SANDBERG and HOLLY) 31
Proteins, distribution (BAERNSTEIN) xxv, 669
Suprarenal:
Gland, chemistry (KENDALL) iv
Surface effects:
Pancreas lipase compounds, activation, relationship (GLICK and KING) 675
Sweat:
Acid-base balance (FISHBERG and BIERMAN) 433

XUM

T

Temperature:
Gastrointestinal tract (HEPBURN, EBERHARD, RICKETTS, and RIEGER) xliii

Theelin:
Liquor folliculi extracts, comparison (CURTIS) liv

Theelol:
Bioassay (THAYER and MACCORQUODALE) liii
Liquor folliculi extracts, comparison (CURTIS) liv
Preparation (THAYER and MACCORQUODALE) liii

Thyroid gland:
Iodine, iodine administration effect (GUTMAN, BENEDICT, BAXTER, and PALMER) 303
Thyroxine, iodine administration effect (GUTMAN, BENEDICT, BAXTER, and PALMER) 303

Thyroxine:
Thyroid gland, iodine administration effect (GUTMAN, BENEDICT, BAXTER, and PALMER) 303

Tilletia levis:
See Wheat smut.

Tissue:
Animal, lipids, unsaturation and composition, relationship (SINCLAIR) xxxiv
Human, electrical conductivity, alternating currents (HEMINGWAY and MCCLENDON) xcix
Iodine determination (BAUMANN and METZGER) xc
Plant, acids, determination. I (PUCHER, VICKERY, and WAKEMAN) 605
—, nitrate nitrogen determination (VICKERY, PUCHER, and WAKEMAN) lxxxix
—, nitric acid determination (PUCHER, VICKERY, and WAKEMAN) 605

Titration constants:
Amino acids, formol titration (LEVY) xcii

Toad:
Poison, chemistry (JENSEN and CHEN) cx

Toxicity:
Egg white, heat effect (PARSONS) xxx

Trimethylamine:
Wheat smut, isolation (HANNA, VICKERY, and PUCHER) 351

Trypsin:
Anti-, insulin protection (HARNED and NASH) li

Tryptophane:
Body weight, corn-meal protein, supplement, effect (CARY and HUFNAGEL) xxxii
Glutelins (CSONKA) 281

Tubercle bacillus:
Human, phthioic acid fraction, levorotatory acid in (ANDERSON) 639

Tubercle bacillus—*continued:*
Lipids, chemistry. XXVII (Anderson and Uyei) 617
XXVIII (Anderson) 639
Tyrosine:
Glutelins (Csonka) 281

U

Ultrafiltration:
II (Greenberg) xlv
Blood serum calcium, diffusible (Nicholas) 457
Ultra-violet:
Absorption spectra, amino acids and related substances, substituent groups, influence (Anslow and Foster) 37
Rays, dermatitis-preventing vitamin, effect (Hogan and Richardson) vii
Urates:
Excretion, bird (Dreyer and Young) lxx
Urea:
Blood, determination (Campbell) xcvi
—, glucose ingestion effect (Mosenthal and Bruger) lxxxiii
Determination, blood (Campbell) xcvi
—, urine (Campbell) xcvi
Elimination, water relation (Gamble, McKhann, and Butler) lvii
Urine, determination (Campbell) xcvi
Urease:
Anti- (Kirk and Sumner) lxxxvii
Uric acid(s):
Blood plasma, determination, frog and snake (Bordley and Richards) lxxii
Determination, blood plasma, frog and snake (Bordley and Richards) lxxii
—, urine, glomerular, frog and snake (Bordley and Richards) lxxii
Excretion, bird (Dreyer and Young) lxx
Methyl, excretion, methylated xanthines ingestion effect (Hanzal and Myers) lxix
Urine, glomerular, determination, frog and snake (Bordley and Richards) lxxii
Urine:
Calcium excretion, children (Stearns) lxiii
— —, infants (Stearns) lxiii
Glomerulus, phosphates, frog and *Necturus* (Walker, Ellinwood, and Reisinger) lxxii
—, reducing substances, frog and *Necturus* (Walker, Ellinwood, and Reisinger) lxxii
—, uric acid determination, frog and snake (Bordley and Richards) lxxii
Pregnancy, pituitary-like

XUM

Urine—*continued:*
substance, anterior (KATZMAN and DOISY) lii
Sugar, fermentable, normal, nature (WEST, NORRIS, and STEINER) lxxxii
Urea determination (CAMPBELL) xcvi
Volume, pituitary, anterior, extracts, effect (GAEBLER) li

V

Vegetarians:
Basal metabolism (WAKEHAM and HANSEN) 155

Vitamin(s):
A, antimony trichloride color reaction (DUBIN and HOOPER) v
—, avitaminosis (ELVEHJEM and NEU) 71
—, carotene as source (KLINE, SCHULTZE, and HART) 83
— production, *Corynebacterium* (SKINNER and GUNDERSON) 53
—, transfer to liver, rate (NELSON, WALKER, and JONES) vi
—, xanthophyll as source (KLINE, SCHULTZE, and HART) 83
Antineuritic. III (BLOCK and COWGILL) 421
—, purification (BLOCK and COWGILL) 421
B concentrates, growth effect (SURE) 133
—, growth effect, avitaminosis (SURE, KIK, and CHURCH) vi
Vitamin(s)—*continued:*
B, lipid metabolism, avitaminosis, effect (SURE, KIK, and CHURCH) vi
B_1, appetite effect (GRIFFITH and GRAHAM) vii
—, food utilization (GRIFFITH and GRAHAM) vii
B_2, appetite effect (GRIFFITH and GRAHAM) vii
—, food utilization (GRIFFITH and GRAHAM) vii
C, identification, isolation (WAUGH and KING) 325
D, calcium conservation, adult, and. I (KLETZIEN, TEMPLIN, STEENBOCK, and THOMAS) 265
—, fish liver oils, natural, irradiated ergosterol, comparison (STEENBOCK, KLETZIEN, and HALPIN) 249
—, — — —, natural, irradiated yeast, comparison (STEENBOCK, KLETZIEN, and HALPIN) 249
Dermatitis-preventing, ultraviolet rays, effect (HOGAN and RICHARDSON) vii
E concentrate, lettuce, preparation and properties (OLCOTT) x
See also Avitaminosis.

W

Water:
Bound, colloids, biological (GREENBERG) xlv
Urea elimination, relation (GAMBLE, MCKHANN, and BUTLER) lvii

XUM

Wheat:
Smut, *Tilletia levis*, trimethylamine isolation (HANNA, VICKERY, and PUCHER) 351
Work:
Capacity, alkalosis and (DILL, EDWARDS, and TALBOTT) lviii
—, factors (TALBOTT, HENDERSON, EDWARDS, and DILL) xl

X

Xanthines:
Methylated, methyl uric acids excretion, ingestion effect (HANZAL and MYERS) lxix
Xanthophyll:
Vitamin A source (KLINE, SCHULTZE, and HART) 83

Y

Yeast:
Ergosterol, cerevisterol accompanying (HONEYWELL and BILLS) xxxix
Fermentation, monoiodoacetate influence (EHRENFEST) lxxvi
Irradiated, blood effect (HESS, LIGHT, FREY, and GROSS) 369
—, excreta effect (HESS, LIGHT, FREY, and GROSS) 369
—, milk effect (HESS, LIGHT, FREY, and GROSS) 369
—, vitamin D, fish liver oils, natural, comparison (STEENBOCK, KLETZIEN, and HALPIN) 249
Oxidation by, monoiodoacetate influence (EHRENFEST) lxxvi

XUM